Your guide to the world of microprocessors.

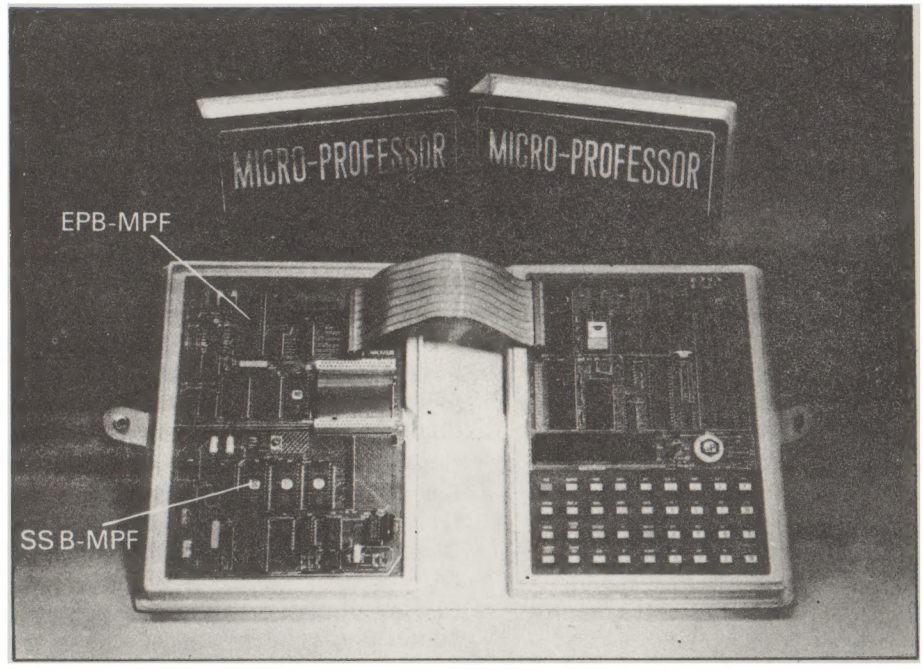
The Micro-Professor™ -A low cost tool for learning, teaching and prototyping.

Here in one attractive package and at a price of only $149.00 is a Z80* based microcomputer to lead you step by step to a thorough knowledge of the world of microprocessors.

The Micro-Professor is a complete hardware and software system whose extensive teaching manual gives you detailed schematics and examples of program code. A superb learning tool for students, hobbyists and microprocessor enthusiasts, as well as an excellent teaching aid for instructors of electrical engineering and computer science courses.

But the Micro-Professor is much more than a teaching device. With it you can do bread boarding and prototyping, designing your own custom hardware and software applications with Z80, 8080 and 8085 compatible code.

The standard 2K bytes of RAM is expandable to 4K,



and the standard 2K bytes of ROM can be increased to 8K.

All this plus a built-in speaker, a cassette interface, and sockets to accept optional CTC/PIO. Bus is extendable.

As well as being an exciting learning tool, the Micro-Professor is a great low-cost board for OEM's. Call for details.

BASIC-MPF

2K tiny BASIC interpreter (BASIC-MPF) has been provided to Micro-Professor users for learning BASIC language programming. It is supplied on 2516 EPROM and can be plugged directly into the expansion memory socket of Micro-Professor.

The commands and statements of BASIC-MPF include:
CONTINUE, CALL, FOR . . . NEXT, GOTO, GOSUB, INPUT, IF . . . THEN, LET, LIST, LOAD, NEW, PRINT, RETURN, RUN, SAVE, STOP

There are two special features: (1) allow users to call subroutines written by machine codes resided in MPF-I mrmory. (2) allow users to write variable values into desired memory address of MPF-I or allow users to read the value of variables from a specific memory address of MPF-I.

ACCESSORIES

Several accessories are available for MPF-I users' choice for further hardware expansion which include:

MPF-CPK	: Z80-CTC (counter and timer) and Z80-PIO (parallel I/O) Chip Kit.
MPF-BBD	: 1.42" x 3.15" Breadboard.
MPF-2KRAM	: 2K x 8 RAM 6116 or equivalent.
MPF-2KROM	: Blank 2K Bytes EPROM TMS2516, I2716 or equivalent.
MPF-4KROM	: Blank 4K Bytes EPROM TMS2532, I2732 or equivalent.

PRT-MPF (Printer)

- Compact and low cost thermal type printer.
- Built-in alphanumeric character patterns.
- Built-in MPF-I memory dump utility.
- Built-in MPF-I BASIC program listing utility.
- Built-in Z80-Disassembler listing utility.
- 20 characters/138 dots per line.
- Printing speed 0.8 line per second.
- Printer head life more than 500,000 lines.

Features and Specifications

MPF-1

CPU	Z80 CPU high performance microprocessor with 158 instructions.
RAM	2K bytes expandable to 4K bytes.
ROM	2K bytes of sophisticated monitor expandable to 8K bytes.
Input/Output	24 system I/O lines.
Monitor	2K bytes of sophisticated monitor. Monitor includes system initialization, keyboard scan, display scan, tape write and tape read.
Display	6-digit, 0.5″ red LED display.
Audio Cassette Interface	165-bit/sec average rate for data transfer between memory and cassette tape.
Extension Connectors	All buses of CPU, channel signals of CTC, and I/O port bus of PIO usable for expansion.
Counter Timer Circuit	Socket is provided.
Parallel I/O Circuit	Socket is provided.
Speaker & Speaker Driver Circuits	2.5″ diameter speaker
User Area	Provides a 3.5″ × 1.36″ wire wrapping area for user's expansion.
Power Requirement	9V, 0.5A adaptor is provided.
User's Manual	Complete self-learning text with experiments and applications.
Keyboard	36 keys including 19 function keys, 16 hex-digit keys, and 1 user-defined key.

RS	Reset the system.
ADDR	Set memory address and display content.
DATA	Input data to memory or register.
PC	Recall program counter.
REG	Select register and display contents of register.
+	Display content of next memory or register.
−	Display content of last memory address or register.
STEP	Single step execution of user's program.
SBR	Set break point of user's program.
MONI	User's program break and return to monitor.
GO	Execute the user's program.
INS	Insert data of the address followed by the current display address.
DEL	Delete data of the current display address.
MOVE	Move memory block in the RAM.
RELA	Relative address calculation. Calculates and stores relative address.
TAPE WR	Store data to the cassette tape.
TAPE RD	Load data from the recorder.
INTR	Maskable interrupt.
USER KEY	User defined key.
O-F	Hex-digits or register selection.

EPB-MPF Specifications

Hardware Specifications

Compatible with MPF-1. Use 40-pin flat ribbon cable and male connector to interface with MPF-1.

ROM: Single +5V EPROM 2516 × 1. Total of 2K bytes. Monitor EPROM address: 9000—97FF.

RAM: Static RAM, 6116 ×2. Total of 4K bytes. Basic RAM address: 8000—8FFF.

I/O Port: Programmable I/O port, 3255 × 1. Total of 24 parallel I/O lines. I/O address: CC-CF

System Power Consumption: 25V/30mA and 5V/350mA

Main Power Input: 30V/75mA and 9V/400mA adaptor is provided. Power adaptor input 110V.

Textool: 24-pin, zero insertion force socket.

Software Specifications

READ: Read data from EPROM onto RAM buffer.

VERIFY: Verify EPROM data with RAM buffer.

LIST: Display or modify data on RAM buffer.

RESTART: Restart to initial state of EPB-MPF.

PROGM: Write data from RAM buffer to EPROM.

DEL: Delete data from the current display address in RAM buffer.

INS: Insert data onto the address followed by the current display address of RAM BUFFER.

SSB-MPF Features

- Uses high reliability TI speech synthesis chip.
- 4KB EPROM for time-clock program and speech utility.
- Two EPROM sockets for expanding speech vocabulary.
- Shares the Z80 CPU of MPF-1 as host controller.
- Uses keyboard and speaker of MPF-1 as input/output device.
- Adjustable voice pitch and volume.
- 9V, 0.5A adaptor is provided.
- Complete accessories including 40-pin, double-headed connector, audio jumper, operation manual, etc.

DISTRIBUTED BY: International Communications Systems Pty. Ltd., 8 Nile Street, Port Adelaide, Sth. Aust. 5015. Tel. 47 3688